ABSTRACT

In a radially anisotropic sintered magnet of annular shape, the remanence in a radial direction of the annulus increases and decreases at intervals of 90° in a circumferential direction of the annulus, and the remanence in a radial direction over the entire circumference of the annulus has a maximum of 0.95-1.60 T and a minimum equal to 50-95% of the maximum. In a permanent magnet motor comprising a plurality of stator teeth, the radially anisotropic annular sintered magnet is incorporated after it is magnetized in 4n poles (wherein n is an integer of 1 to 20) so that the boundary between N and S poles is located within the range that is centered at the radial direction where the remanence exhibits the minimum and extends ±10° therefrom in a circumferential direction. The radially anisotropic annular sintered magnet undergoes neither fracture nor cracking during the sintering and aging/cooling steps even when it is shaped to a low inner/outer diameter ratio and has satisfactory magnetic properties. A permanent magnet motor comprising the radially anisotropic annular sintered magnet is inexpensive and of high performance.